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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,427	10/13/2005	Shinichi Tanaka	112857-590	9480

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EXAMINER	
NICKERSON, JEFFREY L	
ART UNIT	PAPER NUMBER
2442	
MAIL DATE	DELIVERY MODE
05/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/549,427	TANAKA ET AL.	
	Examiner	Art Unit	
	JEFFREY NICKERSON	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Application No. 10/549,427 filed nationally on 13 October 2005 and internationally on 02 February 2005. The request for continued examination presented on 05 March 2009, which provides change to claims 23-27 and 29-31, and provides change to the abstract, is hereby acknowledged. Claims 23-31 have been examined.

Specification

2. The RCE presented on 05 March 2009 providing change to the abstract is noted. All outstanding objections to the abstract are hereby withdrawn.

Claim Objections

3. The RCE presented on 05 March 2009 providing change to the claims is noted. All outstanding objections to the claims are hereby withdrawn.

Response to Arguments

4. Applicant's arguments filed 05 March 2009, with respect to the rejection(s) of claim(s) 23-31 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, new grounds of rejection may appear below.

Independent claims 23, 26, and 29

Applicant argues the combined teachings of Tan et al (US 5,978,560), Gnanasivam et al (US 6,728,905 B1) and Liu et al (US 5,031,089) do not render obvious a limitation found within these claims, as amended. Specifically applicant argues that the combined teachings fail to provide for the following:

> *"wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus".*

Applicant's arguments are persuasive, and, therefore, the rejections of these claims are hereby withdrawn.

Dependent claims 24-25, 27-28, and 30-31

Applicant argues these claims conditionally based on the arguments presented for their parent claim(s).

Applicant's arguments are persuasive, and, therefore, the rejections of these claims are hereby withdrawn.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al (US 5,978,560), and in further view of Gnanasivam et al (US 6,728,905 B1), Liu et al (US 5,031,089), and Lea et al (US 6,314,447 B1).

Regarding claim 23, Tan teaches an information processing apparatus (print server/supervisor), which is coupled to a plurality of other information processing apparatuses (other printers/output devices) through a network, transmitting a software cell including a command (job ctrl) and a program (job data) to the other information processing apparatuses, and carrying out network distributed processing (Tan: abstract, Figure 1, Figure 3, col 2, lines 45-64), the information processing apparatus comprising:

capability exchange means for collecting information regarding resources and operating statuses of the other information processing apparatuses and creating an apparatus information table by transmitting software cells to all the other information processing apparatuses on the network (Tan: abstract; col 3, line 57 – col 4, line 23), wherein the apparatus information table includes apparatus data associated with all the other information processing apparatuses when the information processing apparatus is in a particular state (Tan: col 3, line 57 – col 4, line 23), and wherein the apparatus information table includes identifications associated with all the other information

processing apparatuses and the statuses associated with all the other information apparatuses on the network when the information processing apparatus is in a particular state (Tan: col 3, line 57 – col 4, line 23), the software cells requesting transmissions of information regarding the other information processing apparatuses and receiving software cells as replies from the other information processing apparatuses (Tan: col 5, lines 51-55);

apparatus specifying means for comparing information regarding a resource required to execute a function program, with information regarding the resource and the operating status in the apparatus information table, and specifying one of the information processing apparatuses capable of executing the function program if the function program retained in the information processing is executed (Tan: col 5, line 32 – col 6, line 38); and

processing requesting means for transmitting a software cell requesting an execution of the function program to the information processing apparatus specified in the apparatus specifying means (Tan: abstract; col 5, line 32 – col 6, line 38).

Tan does not teach wherein the information processing apparatus includes a master/slave status;

wherein a particular status is a master status;

wherein a particular status is a slave status;

wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other

information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus; or

wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus.

Gnanasivam, in a similar field of endeavor, teaches wherein the information processing apparatus includes a master/slave status (Gnanasivam: col 15, lines 30-63);

wherein a particular status is a master status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16); and

wherein a particular status is a slave status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Gnanasivam for maintaining master/slave status information. The teachings of Gnanasivam, when implemented in the Tan system, will allow one of ordinary skill in the art to maintain master/slave statuses of devices in a printing environment. One of ordinary skill in the art would be motivated to utilize the teachings of Gnanasivam in the Tan system in order to easily identify which devices are a master or a slave device via a lookup table.

The Tan/Gnanasivam system does not teach wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus; or

wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus.

Liu, in a similar field of endeavor, teaches wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus (Liu: abstract specifies all nodes may poll one another for load information).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Liu for load balancing an trading load

information on a decentralized network. The teachings of Liu, when implemented in the Tan/Gnanasivam system, will allow one of ordinary skill in the art have each printer maintain its load information and perform supervisory activities in a decentralized fashion. One of ordinary skill in the art would be motivated to utilize the teachings of Liu in the Tan/Gnanasivam system in order to allow any device to receive a client command for processing and eliminate a single point of failure.

The Tan/Gnanasivam/Liu system does not teach wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus.

Lea, in a similar field of endeavor, teaches wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information (self-describing data SSD) of said information processing apparatus (Lea: Figure 8, steps 810-814; col 11, lines 5-34); and

wherein said classification identification information indicating at least one of a feature and a function of said information processing apparatus (Lea: Figure 9, item 320; Figure 5; col 6, lines 11-18; col 8, lines 10-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Lea for obtaining self-describing data

from newly connecting devices indicating features and functionality. The teachings of Lea, when implemented in the Tan/Gnanasivam/Liu system, will allow one of ordinary skill in the art have each printer maintain its capable features and functions, current load information, and perform supervisory activities in a decentralized fashion. One of ordinary skill in the art would be motivated to utilize the teachings of Lea in the Tan/Gnanasivam/Liu system in order to allow the network to identify new functionalities of newly connecting devices.

Regarding claim 24, the Tan/Gnanasivam/Liu/Lea system teaches wherein the capability exchange means, upon connection to the network of the additional information processing apparatus which was not previously connected to the network, collects information regarding a resource and an operating status of the additional information processing apparatus and updates the apparatus information table (Lea: col 11, lines 5-64 for collecting capability information of newly connecting device and updating table; Liu: abstract for wherein capability information is the operating status).

Regarding claim 25, the Tan/Gnanasivam/Liu/Lea system teaches wherein the other information processing apparatus has a plurality of processors for processing the function program (Liu: col 3, lines 19-38 provides for multiprocessor nodes); and

wherein the capability exchange means collects information regarding a resource and an operating status of each of the plurality of processors, and saves the information in the apparatus information table (Tan: abstract; col 5, line 32 – col 6, line 38 for

obtaining resource and operating status of a particular component; Liu: col 3, lines 19-38 for wherein component is each processor).

Regarding claim 26, this method claim contains limitations corresponding to that of claim 23 and the same rationale of rejection is used, where applicable.

Regarding claim 27, this method claim contains limitations corresponding to that of claim 24 and the same rationale of rejection is used, where applicable.

Regarding claim 28, this method claim contains limitations corresponding to that of claim 25 and the same rationale of rejection is used, where applicable.

Regarding claim 29, this system claim contains limitations corresponding to that of claim 23 and the same rationale of rejection is used, where applicable.

Regarding claim 30, this system claim contains limitations corresponding to that of claim 24 and the same rationale of rejection is used, where applicable.

Regarding claim 31, this system claim contains limitations corresponding to that of claim 25 and the same rationale of rejection is used, where applicable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Examiner, Art Unit 2442

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2442